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ABSTRACT

The BUILD Program (Businesses United to Increase Literacy Development) was conducted from June 1991 through December 1992 as a cooperative workplace literacy program joining Arapahoe Community College and four companies in Littleton, Colorado. This document consists of three modules for the problem-solving and computer learning systems classes of the program. The first module contains three lessons on problem-solving team meetings that cover putting a problem-solving meeting together, solving problems, and conducting the meeting. The second module demonstrates a successful model of problem solving in the workplace. Its five lessons cover the following: identifying the problem, researching, analyzing the problem, selecting and planning a solution, and presentation of the solution. The seven lessons of the third module on computer learning systems are on the following topics: computer hardware and software, the keyboard, start up and shut down, computer games, learning styles, and the keyboard tutor. Lessons include an objective, required materials, allotted time, outlines of activities with instructor's notes, and appendixes containing handouts or transparency masters and student worksheets. (KC)

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PROBLEM SOLVING

WORKPLACE EDUCATION PROGRAM CURRICULUM

Arapahoe Community College

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Problem Solving Team Meetings

Workplace Learning

Skills

WORKPLACE LEARNING SKILLS
by
JENNIFER BURKHART

INTRODUCTION

The purpose of this module is to expand upon the foundations laid in the Communications Module as well as facilitate team problem solving and meeting skills. As in all of the modules, the students will practice "Learning to Learn" and "Critical Thinking" competencies throughout this module. The following in a list of target competencies included in this module:

OBJECTIVES / TARGET COMPETENCIES

- * **Restating**
- * **Repeating**
- * **Paraphrasing**
- * **Summarizing**
- * **Simplifying**
- * **Reporting**
- * **Retelling**
- * **Interviewing**
- * **Questioning**
- * **Arguing**
- * **Describing**
- * **Interpreting**
- • Debating
- * Giving Critiques
- * Complimenting
- • **Using appropriate oral communication (managers, peers, customers...)**
- • Presenting
- * **Goal setting**
- • Managing Conflicts
- * Giving and following instructions
- * **Solving problems (6 steps)**
- * Working in teams
- * **Recognizing and utilizing different learning styles in communicating**
- • Utilizing appropriate workplace vocabulary

Note: Critical Thinking Skills in **Bold** letters
Learning to Learn Skills denoted with asterisk*

APPLICATIONS IN THE WORKPLACE

- Problem solving in teams
- Team work
- Facilitating Team Meetings

MODULE CONTENT / LESSONS

1 • Putting a Problem Solving Meeting Together
2 • Problem Solving
3 • Conducting the Meeting

MODULE: PROBLEM SOLVING TEAM MEETING

LESSON #1 - Putting a Problem Solving Meeting Together

OBJECTIVE: To introduce and practice identifying problems which are best handled by a group meeting and to review the competencies of effective problem solving.

REQUIRED MATERIALS: White/Black Board, Marker/Chalk, Pencil and Paper, Appendices 1.1

ALLOTTED TIME: 1 Hour

ACTIVITIES:

I. **Discussion:**

A. Ask the students if they have ever sat through a meeting which was ineffective. Why was or wasn't it effective?

B. Give the following list of reasons on the board.

1. This list was taken from a study involving 1305 people who were asked, " What makes a meeting bad?". From this sample size, 90% gave the following answers:

- No goals or agenda
- Getting off the subject
- Ineffective leadership
- Too long
- Irrelevant information
- Ineffective decision making
- Rambling, redundant, digressive discussion
- No published results or follow-up action
- No pre meeting orientation
- Poor or inadequate preparation
- Starting late
- Disorganized
- Time wasted
- Inconclusive
- Interruptions

2. How many of these answers correspond to the students' answers.

C. One of the main problems associated with bad meetings is that many times they are held without a purpose. Has anyone ever felt as if the meeting they just attended shouldn't have been held? Many times this comes from a misinterpretation of what type of problem should be dealt with in a meeting. Let's look at some questions we can ask to assure that this doesn't happen.

II. **Demonstration:**

A. Checking to verify the type of problem you have.

1. When wondering whether a problem is best solved in a group meeting, the following questions may help you along. (Write the below on the board.)

   - Is the job beyond the capacity of one person?
   - Are individuals' tasks interdependent?
   - Is there more than one docision or solution?
   - Are misunderstandings or reservations likely?

2. If you answer "yes" to these questions, you definitely should try to solve this problem as a group.

3. How many of the above questions must have the answer "yes" before you're sure that the problem requires a meeting? (It depends on the problem.)

B. Think of some possible problems before class and introduce them now. Ask the questions and decide whether a meeting would be appropriate.

III. **Practice:**

A. Hand out Appendix 1.1 and ask the students to complete this work sheet in groups of 3 to 4.

B. Review the answers with the class. Discuss and differences. (Appendix 1.2 has the answers).

IV. **Review:**

A. Discuss the points made above.
B. Answer questions.
C. Introduce the next lesson on "Problem Solving"

MODULE: PROBLEM SOLVING TEAM MEETING

LESSON #2 - Problem Solving

OBJECTIVE: To facilitate the development of problem solving meeting participant skills which enable the student to effectively participate in team meetings.

REQUIRED MATERIALS: Black/White Board, Marker/Chalk, Pencil and Paper, Appendix 2.1

ALLOTTED TIME:

ACTIVITIES:

I. **Discussion:** How do we know that a problem exists?

A. Ask students if someone else has ever perceived a situation to be a problem, but you just didn't see it the same way?

B. Ask students if they ever had the above happen here at work in a meeting.

C. Ask students what happened in the meeting? Did the problem get resolved?

D. Talk about the importance of "buy-in".

Instructor's note: A problem cannot be solved if it isn't perceived as a problem by all of those involved in its solution, therefore; we need what is called "buy-in" of the problem. This means that all involved in the solving of the problem, agree that there is a problem. *This is not agreeing on the solution.

E. Review the Problem Solving and Brainstorming handout (appendix 2.1). Review the guidelines.

1. One easy way to obtain this buy-in is to have a brainstorming session in which the team thinks of symptoms that they see caused by this problem. These symptoms may come in the form of **Hard data** or **Soft data.** Ask the students what they would describe as Hard data. (Hard data = Data that is tangible or measurable / Soft data = Data that is intangible and/or subjective).

2. Another way to obtain buy-in is through data collection. We've seen a Statistical Capability Study in the Computation module which delineates the steps to gathering the data necessary in identifying the need of a quality assurance program. Similarly, we could use the same idea in obtaining the buy-in of a problem. Delegating the task of data collection to team members brings with it the problem awareness or buy-in.

F. Further review Problem Solving and Brainstorming handout

1. Once the "buy-in" of the problem has occurred, the problem solving steps on appendix 2.1 may be initiated as a team. This may occur in a short 1 meeting session or in a longer 2,3 even 4 meeting time frame. These steps are all important to the success of the solution and the problem solving meeting.

2. Introduce the next lesson on Conducting a Meeting.

II. **Review:** Question and Answer
Field the students questions. Have the students answer each others questions as well.

MODULE: PROBLEM SOLVING TEAM MEETING

LESSON #3 - Conducting a Meeting

OBJECTIVE: To permit the students to experience a problem solving team meeting which will become a vital part of their work experience in teams.

REQUIRED MATERIALS: Black/White Board, Chalk/Marker, Pencil and Paper,Appendix 3.1

ALLOTTED TIME: 2 Hours

ACTIVITIES:

I. **Discussion:**

A. Ask the students the following questions:

1. What is needed to have a good meeting? (*Refer to Barriers to Communication Hand out in the Communication module for ideas)

2. How many feel that the meetings they attend are effective and worth the time off the line?

3. Why are or why aren't these meetings effective?

4. How would you change the meetings you are now attending?

B. Discuss the following possible answers to the above.

1. Space, good acoustics, comfortable temperature, good time of the day, buy-in of the problem, information, resources, encouraging team members...

2. Ask the students what an encouraging team member is. Hand out appendix 3.1 and review the list of characteristics. Add more of the students' suggestions.

3. What role do they play in a meeting? Do they feel that they can be an encouraging team member? Why or why not? Do they feel as if they have any power in the meeting? What determines the role they play in the meeting?

Instructor's note: This would be a good time to talk about the responsibilities that each team member has in a problem solving team. It is their responsibility to participate in the meeting. To help keep the meeting going. To listen effectively and participate when appropriate. If a team member does not act as an encouraging team member and doesn't act in a proactive manner, the team and its solution may not work. Talk about hidden agendas.

C. Discuss the possibility of **Hidden Agendes** in a team meeting.
   1. What are they?
   2. How can you identify them?
   3. How many can think of a hidden agenda that they have?

Instructor's note: Hidden agendas are individual goals that may not be in accordance with the group goals. Someone who wants a raise may not voice his/her opinion about and idea... Hidden agendas can destroy the group goal. If someone agrees to something at the meeting and returns to the floor only to prove that he/she doesn't agree, this may tear down the plan or solution agreed upon by the group/team. Be aware of quiet individuals, people who agree too quickly or people who change their mind too quickly. These people may have a hidden agenda. Ask open-ended questions to obtain the true opinions of these people.

D. Discuss the various stages of a meeting.

   1. Beginning the meeting:
      a. Identify the goals
      b. Provide necessary background information
      c. Show how the group can help:
         (e.g. We're counting on everyone here to suggest areas where we can cut losses once we've come up with ideas. I'll ask each of you to work out a schedule for putting the ideas to work in your department).
      d. Preview how the meeting will run.

Instructor's note: The majority of the above and the following is the job of the facilitator. Nevertheless, it should be stressed that the entire group is responsible for helping the facilitator by asking question... These questions will be discussed shortly.

2. During the meeting:
   a. Keep the discussion on track.
   b. Remind the group of time pressures.
   c. Summarize and redirect the discussion if necessary.
   d. Use relevancy questions: I'm confused, how would leasing new equipment instead of buying help us productivity-wise?

3. Concluding the Meeting:
   a. When to conclude:
      1. Scheduled closing time
      2. Lack of resources to continue
      3. When agenda has been covered

   b. How to conclude:
      1. Signal when time is up
      2. Summarize
      3. Thank the group

   C. **Follow up!** Follow up the meeting with a list of accomplishments. What to work on for the next meeting.

E. Discuss the types of questions we can all use to help facilitate the meeting.

1. Overhead Questions:
   a. Directed to everyone
   b. We need to find some way of rewarding our tip producers. I'd like to hear your ideas."

2. Direct Questions:
   a. Directed to one person
   b. "How do you feel about that, Greg?"

3. Reverse Questions:
   a. Aimed at bringing someone back on target.
   b. "That's a good question Laurie. Do you think it's a practical idea?"

F. Discuss the agenda which help the team organize the meeting:

1. Pre-meeting agenda (appendix 3.2) allows the team members to organize the way the meeting will run prior to the meeting. It is a very useful aide.

2. Hand out the appendix 3.2 and review how it is organized.

3. Answer any questions.

II. **Practice:**

A. Using the above information, break out into groups of 4 - 6 people. Have each group organize a meeting.

1. Brainstorm a problem - everyone must identify and buy-in to this problem.

2. Work through the problem solving work sheet to find the potential solutions.

3. Assign roles to each member of the team. One must be a facilitator. The rest all need to take a potential solution or aspect of one solution and research it and prepare to talk about it at the meeting. These people will be giving the necessary background information of the meeting.

4. Hand out appendix 3.3 - the agenda form. Have each team make an agenda for their meeting following the example of appendix 3.2.

5. Allow each member to research/prepare his or her part . This problem **must** deal with a problem at work! Stress that if they would like to present this to management they may.

6. Allow 30 - 60 minutes for each meeting. If more time is needed and the students identify this prior to giving the meeting, allow them more time.

B. Present the meetings.

1. The team gives the necessary background.
2. The class is the rest of the team which will aid in solving the problem. This is a Problem Solving Meeting!

3. Ask one team to critique the performance of another so that all teams are critiqued by a member of the class. Ask the students to come up with the important points to critique before the presentations are given. Write these on the board. (A scale may be helpful, i.e. 1 - 5 / 1 bad - 5 good)
4. Upon completion of all the meetings, exchange critiques. (The instructor should give one for each meeting.)

C. Review meetings.
1. How did they feel?
2. What would they change?
3. Did they feel that this was and effective meeting?

III. **Review:**
A. Answer the students questions.
B. Ask the students if they feel that this exercise will help them on the job, now or in the future?

APPENDICES

Workplace Learning

Skills

Appendix 1.1

Activity: ***Problem Solving Groups***

Directions: Place a check next to the statements which would be best handled by a Problem Solving Group.

___ • Developing procedures for interviewing prospective employees.

___ • Tabulating responses to a customer survey.

___ • Investigating several brands of office machines for possible purchase.

___ • Choosing the most desirable employee health insurance program.

___ • Organizing the company picnic.

___ • Researching the existence and cost of training programs for improving communication among staff members.

Appendix 1.2

Activity: *Problem Solving Groups*

Directions: Place a check next to the statements which would be best handled by a Problem Solving Group.

X • Developing procedures for interviewing prospective employees.

___ • Tabulating responses to a customer survey.

___ • Investigating several brands of office machines for possible purchase.

X • Choosing the most desirable employee health insurance program.

X • Organizing the company picnic.

___ • Researching the existence and cost of training programs for improving communication among staff members.

Appendix 2.1

Six Steps to Problem Solving

- Identifying and selecting the problems
- Analyzing the problems
- Generating potential solutions
- Selecting and planning the solutions
- Implementing the solution
- Evaluating the solution

Hints for Brainstorming Sessions:

Phase I: Generating Potential Solutions

- Any suggestion is "fair game"!
- The important thing is to be creative!
- Don't worry if something seems impractical or impossible. It might lead to something else that will work!
- Be sure to record everyone's suggestions where everyone can see them.
- Don't worry about duplications.
- Never say anything is "stupid". It may be the best solution in the long run.

Phase II: Selecting and Planning the Solutions

- Review all the suggestions and eliminate any duplications.
- Determine pros and cons of remaining potential solutions
- Determine means by which to measure success/failure of solutions.
- Initiate procedures for final selection and implementation.

Appendix 3.1

Encouraging Team Members

Directions: Keep the following things in mind when acting as a part of a team. These suggestions not only promote effectiveness but also productivity.

- **Smile**
- **Give direct eye contact**
- **Create a pleasant atmosphere**
- **Keep a positive attitude**
- **Say, "Please," "Thank you," and "May I?"**
- **Be competent**
- **Remain flexible**
- **Have an appropriate sense of humor**
- **Maintain ethical standards**
- **Stay optimistic**
- **Encourage others**
- **Manage conflict situations for win-win situations**
- **Cooperate and be helpful**
- **Generate options for problem solving**
- **Show compassion**
- **Acknowledge co-workers**
- **Keep and open mind**
- **Be courteous**
- **Communicate clearly**
- **Be informative**
- **Listen thoughtfully**
- **Show respect**
- **Be a model of effective behavior**

- Taken from "Success Strategies" by Elizabeth Sharp, 2880 S. Locust #307 - N. Denver , 80222

Appendix 3.2

Agenda

Date: March 19, 1992

To: Joy McMasters, Fred Brady, Kevin Jessup, Monica Flores, Dave Cohn

From: Ted Gross

Subject: Planning meeting for new Louisville office.

Time/Place: Tuesday, April 12, from 9:30 to 11:00 AM in the third - floor conference room.

Background: We are still on target for an August 10 opening date for the Louisville office. Completing the tasks below will keep us on schedule - vital if we're to be ready for the fall season.

We will discuss the following items:

1. Office equipment

   Please come with a list of business machines and other equipment you think will be needed for the office. At the meeting we'll refine this list to standardize our purchases as much as possible. Let's try to start out with compatible equipment!

2. Office Decoration

   Ellen Tibbits of the Louisville Design Group will present a preliminary design for out reaction. She will come up with a final plan based on our suggestions.

3. Promotion

   Kevin wants to prepare a series of press releases for distribution to Louisville media a month or so before the office opens. Please come with suggestions of items that should be mentioned in these releases.

Appendix 3.3

Agenda

Date:

To:

From:

Subject:

Time/Place:

Background:

PROBLEM SOLVING IN THE WORKPLACE

INTRODUCTION:

The purpose of this module is to demonstrate a successful model of a workplace problem solving lesson. It is, in fact, a series of lessons designed to be completed over a 12 to 16 hour instructional period. A good portion of the activity in this guide are independent activities that need to be completed by each team of students. So a good part of the 12 to 16 hours are hours spent researching and gathering information on the given problem. The role of the instructor in this guide, and for that matter in most all classroom environments, is as a coach; leading the teams through a process to success.

OBJECTIVES / TARGET COMPETENCIES

* Asking and Answering Questions
* Active Listening
* Organizing Information
* Finding Information
* Predicting Outcomes/Cause and Effect
* Writing Appropriate Written Communications
* Using Appropriate Oral Communication
* Identifying and Selecting Problems
* Analyzing Problems
* Finding Potential Solutions
* Selecting and Planning Solutions
* Implementing Solutions
* Prioritizing Information
* Brainstorming
* Summarizing Information
* Managing Conflicts
* Coaching and Modeling

PROBLEM SOLVING IN THE WORKPLACE

WORKPLACE APPLICATIONS:

* Developing stronger interpersonal skills; practical application of communications skills studied in WLS Communications Modules.

* Team development skills that may be directly translated and applied into real workplace environment.

* Practical problem solving skills that focus on an organized and sequential approach to finding solutions to problems encountered in workplace process and in personal, everyday problems of the individual.

* Stronger, more confident workers more capable of working independently and in teams. Better, more communicative staff.

NOTE: The instructor should be very careful to communicate all actions of the class that may effect others outside of the classroom prior to beginning any of these activities. This could include any effected supervisors, co-workers or administrative staff. Some of these activities will involve contacting outside sources and they should be made aware of the potential for that contact whenever possible. Also, during the implementation of solutions section, effected parties should be made aware of the purpose and content of this lesson.

The first and most important step in this series is for the instructor to request sources from management staff to provide teams with workplace problems.

MODULE CONTENT / LESSONS

Lesson 1: Identifying the Problem

Lesson 2: Researching

Lesson 3: Analyzing the Problem

Lesson 4: Selecting and Planning a Solution

Lesson 5: Presentation of the Solution

MODULE: PROBLEM SOLVING IN THE WORKPLACE

Lesson 1: Identifying the Problem

Objective: To provide student teams with an opportunity to address real work related situations in a detached, protected environment allowing each team to develop skills required to become effective problem solving teams.

Required Materials: Appendix 5.1

Time Allotted: 1 hour

Activities:

If possible, invite management to participate in this stage of the problem solving process. Ask them to present workplace problems to the class that they would be willing to allow the teams to work on. Write all suggestions on a board. If time, situations or organizational culture does not allow management participation, ask the students to brainstorm problems of their own. They may not necessarily be related to the workplace, but may relate to any aspect of their lives. Write everything on a board and review when finished.

With the class divided into teams of 3 to 4 participants each, ask each team to reach a consensus within their teams and to choose one problem that they would like to address in this lesson. When each team has made their selections, ask the teams to work together and begin to analyze their problem. Instruct them to brainstorm the reasons why this is a problem - what are some possible origins of the situation - what is involved. *It is important to note to the class that in a workplace situation or problem there is never a question of "who". If there is a problem with process, there may be people involved but there is never any blame.* Emphasize this point. Also, emphasize that in the brainstorming process all ideas are fair game. There are no dumb ideas in a brainstorm. Sometimes the best solutions come out the most off the wall suggestions. Tell each team to write all suggestions on paper. When they finish the brainstorm, tell them to work together to trim out any duplications or unrelated suggestions.

Finally, instruct each team to develop 3 to 5 questions that they can ask other people to gather information about the problem. These questions should be related to the problem and not necessarily to solutions. The point should be that they will want to gather information about the specific problem and how it might affect others, not to gather possible solutions. That will come later. Write their questions on the lines provided on appendix 5.1 so that each member will have the same questions.

MODULE: PROBLEM SOLVING IN THE WORKPLACE

Lesson 2: Researching

Objective: To involve and instruct team members in the process of understanding workplace problems.

Required Materials: Appendix 5.1.

Time Allotted: 2 - 3 hours

Activities:

Before leaving the classroom, each team should work together to develop a list of people that they intend to interview. Split into pairs gather information. Teams should list at least ten people to interview. Five for one pair and five for the other. List the names of all ten people on appendix 5.1. Teams should decide who will interview whom, before leaving the classroom. In some cases, specifically with management, it may be prudent to have teams appoint representatives to interview these people. Too many team members at once may create a bad impression.

With the names of people written down, and with the lists of questions written in the previous lesson, instruct each team to venture out into the workplace to interview the people on their lists. Give them as much time as is required and minimize the pressure. This is both for the sake of the information that they will gather, but also for the sakes of the people that they are going to approach. Sometimes appointments may be appropriate. It is important that team members try to stay as close to the questions that they developed earlier. This will help them to maintain a more detached approach to the problem. Each team member should have a notebook with them, or an appointed writer to write everything that each interviewee says about the problem. This also helps to improve note taking skills. When everyone on each list has been interviewed, students should return to the class. No breaks.

MODULE: PROBLEM SOLVING IN THE WORKPLACE

Lesson 3: Analyzing the Problem

Objective: To familiarize students with methods of using information in the problem solving process.

Required Materials: Appendix 5.1 and 5.2; notes from people interviewed in the previous lesson.

Time Allotted: 1 hour

Activities:

Each team should have notes taken from their interviews with people on the job. Have teams combine all of the information that they have gathered onto a separate piece of paper. Each member should copy the information from all other members of their team onto their own paper so that everyone has the same information. Next, have the teams discuss and eliminate any irrelevant information, (instructor should be available to answer any questions about relevancy, or to offer any assistance). Then members should discuss and order the remaining information in order of importance on appendix 5.2. There should be a consensus on this aspect of the process. What may seem important to some may not to others. Teams should then develop a master list of everything that they have gathered on the subject on 5.2. This will be an outline of their selected problem.

MODULE: PROBLEM SOLVING IN THE WORKPLACE

Lesson 4: Selecting and Planning a Solution

Objective: To familiarize students with methods of selecting possible solutions to workplace problems.

Required Materials: Appendix 5.3; all materials from previous lessons.

Time Allotted: 45 minutes

Activities:

On appendix 5.3, teams should first brainstorm a minimum of 15 possible solutions to the problem outlined on appendix 5.2. Team members should then discuss and eliminate any duplications and trim the possible solutions to 6 on the lines in the center of the page. After more discussion, team members will need to trim the 6 possible solutions to 2 on the lines at the right of the page. Finally, each team will need to reach a consensus agreement on the one most effective solution and write that solution on the single line below.

Lastly, team members will need to define, and agree on, the best method of implementation of their solution. Each member should write the teams suggestions at the bottom of 5.3.

MODULE: PROBLEM SOLVING IN THE WORKPLACE

Lesson 5: Presentation of the Solution

Objective: To familiarize students with appropriate methods of communicating solutions to workplace problems to management.

Required Materials: Appendix 5.4; all materials from previous lessons.

Time Allotted: 1 hour

Activities:

Distribute appendix 5.4 and discuss the term "Corporate Culture" with the class. What is their culture like in the workplace? How has their culture changed? How might it be changing in the future?

With their corporate culture in mind, read and discuss the various presentation methods outlined in 5.4. Ask the students to define the pros and cons of each method and to answer questions as to why one method may or may not be as effective as others. After this discussion, each team must reach a consensus about the method of presentation that they feel would be the most effective for the implementation of the solution to the problem they have been working on. When consensus has been reached, teams should read and follow the instructions for their preferred method on appendix 5.4.

Appendix 5.1
PROBLEM SOLVING IN THE WORKPLACE

With the members of your team, write 5 questions to ask other workers and/or management about the problem your team has selected.

1: _____

_____?

2: _____

_____?

3: _____

_____?

4: _____

_____?

5 _____

_____?

With the members of your team, write the names of at least 10 people to interview with the questions above.

1: _____ 2: _____

3: _____ 4: _____

5: _____ 6: _____

7: _____ 8: _____

9: _____ 10: _____

Others: _____

_____

_____

Otherquestions? _____

_____

_____

_____

Appendix 5.2
PROBLEM SOLVING IN THE WORKPLACE

With the members of your team, list the information gathered in the previous lesson in the order of importance to the problem you have selected. Most important information first, with any related information below. Follow the format of the outline provided. Use additional paper if required.

I.)_____

_____

A.)_____

_____

B.)_____

_____

II.)_____

_____

A.)_____

_____

B.)_____

_____

III.)_____

_____

A.)_____

_____

B.)_____

_____

IV.)_____

_____

A.)_____

_____

Appendix 5.3
PROBLEM SOLVING IN THE WORKPLACE

First brainstorm with the members of your team a minimum of 15 possible solutions to the problem you have selected and write them on the lines on the left side of this page. Next, discuss with your team and eliminate any duplications or impractical suggestions, trimming the number of possible solutions to 6. Copy those onto the lines in the center of this page. Then, trim the number again, after discussion, to 2 possible solutions and copy them onto the two lines at the right of this page. Finally, discuss and decide on the one best possible solution and copy that onto the line at the bottom.

1._____

2._____

3._____

4._____

5._____

6._____

7._____

8._____

9._____

10._____

11._____

12._____

13._____

14._____

15._____

1._____

2._____

3._____

4._____

5._____

6._____

1._____

2._____

#1 Solution:_____

What do you think would be the best way to implement this solution?

_____

_____

_____

Appendix 5.4
PROBLEM SOLVING IN THE WORKPLACE

Depending on the Corporate Culture in the workplace, some methods may work better than others when trying to present possible solutions to problems. Some managers respond better to formal presentations, some respond better to informal written memos. Whatever the case may be with your own culture, read the following descriptions and discuss each with your team members. Decide which method would be the most effective method to get your team's ideas implemented into the workplace. Follow the instructions and develop your solution using one of the following formats.

FORMAL REPORT: Involves presenting your ideas to a group of appropriate management staff. You will need to develop an agenda showing exactly what you hope to achieve in the meeting and an outline demonstrating how you reached your conclusions. It is also a good idea to have visual materials available to illustrate your point. Decide who will talk and when, and rehearse your presentation beforehand. Ask the instructor to help with any questions.

FORMAL BUSINESS LETTER: Begin by identifying who should receive the letter. Who will make the decision to implement your solution? Develop an outline first before you begin writing. Everyone on your team should be involved in writing the letter. Sometimes it may help to have everyone write a draft, and then combine the best of each into one letter. Ask your instructor to provide you with a proper format for the finished draft.

MEMORANDUM (memo): A memo should be written so that it may be read by more than one person. Remember to make it short and to the point. Most managers have less than two minutes to decide if what is said in a memo is worth reading. Put your most important ideas first. Ask your instructor for the correct format for a memo, or refer to appendix _____.

COMPUTER LEARNING SYSTEMS

COMPUTER LEARNING SYSTEMS IN THE WORKPLACE

INTRODUCTION

This section of the curriculum guide is designed to outline and define specific technologies that may be used to augment classroom instruction in the workplace. It should be noted that computer-aided learning systems, (CALS), are not yet capable of replacing the teacher in the classroom. It is not that this introduction is being written by a teacher that makes this so; it is more that the computer does not yet possess the cognitive skills necessary to recognize the shifting learning needs of the student. The highs and lows of the learning/human process as it were. Also, available software does not allow for the many specific applications of the workplace learning program. Thus, CAL systems are useful as a learning tool for the student, and an application practice center for skills learned in the classroom.

Technology in the workplace classroom also serves to acquaint the student with new technologies being introduced into the workplace. Technology and its application in more and more work situations has become one of the most significant changes occurring in American work culture. Workers are being asked to become more proficient in the use of computers as well as becoming more accountable for production and service decisions. The application of computer learning systems in the classroom gives the student an opportunity to develop a greater sense of confidence with technology and in themselves as well. It is our intention that this section of the curriculum guide will help to lead the student to a greater understanding of the potential for computer technologies and a greater sense of self-confidence in their use.

OBJECTIVES / TARGET COMPETENCIES

- Organizing Information
- Finding Information
- Scanning
- Understanding and applying symbols and abbreviations
- Following directions (written)
- Summarizing information

APPLICATIONS IN THE WORKPLACE

- Introduction to technologies; overcoming computer-phobia; developing better self-confidence with technology.
- Individually paced reading skills development; reading and following written instruction.
- Finding, organizing and summarizing information

MODULE CONTENT / LESSONS

Lesson 1: The Parts of the Computer (What is Hardware?)

Lesson 2: The Language of the Computer (What is Software?)

Lesson 3: The Keyboard (How to use Your Index Finger Effectively)

Lesson 4: Start up and Shut Down

Lesson 5: The Games We Play

Lesson 6: Learning Styles Inventory

Lesson 7: The Keyboard Tutor (Where available)

Note: Bold highlighted text indicates sections of each lesson to be applied in Workplace Learning Skills classes with native English speaking students,

MODULE: Computer Aided Learning

Lesson 1: The Parts of The Computer (What is Hardware?)

Objective: To familiarize the student with the basic vocabulary and parts of a personal computer system.

Required Materials: Vocabulary Words (appendix 1); Vocabulary Matching - Diagram (appendix 2); Personal Computer System.

Allotted Time: 1 Hour.

Activities:

Introduction of the Vocabulary List (appendix 1). *With some lower level ESL (English as a Second Language) classrooms, it may be necessary to review some language basics first, such as the English alphabet and some pronunciation rules (see Reading and Language - ESL and Communication - ESL)* **The instructor should read the word list out loud first, while the students listen and follow with their lists.** When the first reading is finished, ask students to read a word or two off the list and check pronunciation. Then ask the students to read a word and it's definition. **Discuss the definitions to be certain that meaning is clear. Encourage the students to ask about any of the words that are not understood.** (approximately 20 minutes).

Hand out the diagram (appendix 2). Ask the students to work together and copy the correct vocabulary on each line. Note: encourage teamwork whenever possible. Allow the students 15 to 20 minutes to complete this exercise, and review, (use an overhead projector if available).

Spelling Check: Ask the students to put the lists and diagrams where they cannot see them, and on a clean sheet of paper write each word as the instructor reads from the Vocab. list. Again, encourage them to ask each other for help with difficult words. Repeat each word as often as required. (approximately 15 minutes)

Reality Check: Gather the students around a PC (or two, if available), and identify the various parts from the diagram and list. Let the students explore and remain available to confirm identifications and to answer questions. (10 minutes)

MODULE: Computer Aided Learning

Lesson 2: The Language of the Computer (What is Software?)

Objective: To familiarize the student with basic vocabulary related to software and computer applications.

Required Materials: Vocabulary List (appendix 3); Unfinished Vocabulary Applications (appendix 4); P.C.

Allotted time: 1 hour

Activities:

Introduce the Vocabulary List (appendix 3). *Note: with some lower level ESL classrooms, it may be necessary to review some language basics first, such as the English alphabet and some pronunciation rules, (see Reading and Language and Communication ESL modules).* The Instructor reads each word and definition aloud while the students follow with their lists. When finished, ask the students to read a word and it's definition aloud. Check pronunciation and **discuss the definitions to be certain that meaning is clear. Encourage students to ask questions about any of the words that are not understood clearly.** (approximately 20 minutes)

Introduce the Vocab. Applications worksheet (appendix 4). Instruct the students to read and follow the directions at the top of the page. They may work together and may use the Vocabulary List for help. Also, again, encourage anyone to ask the instructor any questions that their partners may not be able to answer. Debrief and ask the students to read the completed sentences aloud. Check pronunciation and discuss meaning. **Debrief with an overhead projector, if available.**

Instruct the students to keep these Applications Worksheets as they will use them again in a later lesson.

MODULE: Computer Aided Learning

Lesson 3: The Keyboard (How to use your index finger effectively)

Objective: To familiarize the student with the computer keyboard and some basic typing skills.

Required Materials: Keyboard Diagram (appendix 5); Keyboard Practice Instruction sheet (appendix 6); Language Applications sheet (appendix 4), completed; a PC.

Allotted Time: 30 minutes.

Activities:

Distribute the Keyboard Diagram (appendix 5) to the students first and give them a few minutes to study before distributing the Instruction sheet (appendix 6). *Note: for English as Second Language students, it is recommended that basic prepositions and prepositional phrases be introduced and reviewed prior to introduction of this lesson. (See Reading and Language -ESL- module).* **Distribute the Keyboard Instruction sheet and instruct the students to follow all of the instructions on the sheet carefully. Encourage the students to ask questions and to work together as much as they would like.**

As students complete the Instruction sheet, ask them to take out the Language Applications sheet that they completed in the previous lesson. At the personal computer, bring up the word processor (the instructor may need to perform this task at all PCs initially until the students have completed lesson 4 in this module). First, ask the students to type their first and last names. Second, ask the students to type the name of their company and the date. Finally, instruct the students to look again at the true/false section of the Applications worksheet. Tell the students to rewrite each of the five sentences. Write all TRUE statements as they are on the worksheet. Rewrite all FALSE statements to make them true. Students may work in pairs on this exercise, and, again, encourage them to ask questions.

MODULE: Computer Aided Learning

Lesson 4: Start Up and Shut Down

Objective: To begin to familiarize the student with the operation of a computer and maneuvering through available programs.

Required Materials: Welcome to HP Computers (appendix 7) and/or Welcome to Macintosh (appendix 8); PC and/or Macintosh Computer.

Allotted Time: 30 minutes

Activities:

With students working in pairs at the computer(s), distribute the handout materials and instruct them to work together following the instructions given them in the handouts. Remain available to answer questions and to offer help where needed. Encourage partners to help each other through the hard words.

With some lower level ESL classrooms the instructor should read the handout out loud with the class first and familiarize the group with the harder vocabulary, and discuss some of the instructions first before putting the teams to work on the computer(s).

Encourage the group, also, to ask about and try to identify further some of the vocabulary studied in earlier lessons.

MODULE: Computer Aided Learning

Lesson 5: The Games We Play

Objective: To familiarize the student with the programs available on the computer(s).

Required Materials: Macintosh Computer Exercise (appendix 9) and/or HP Computer Exercise (appendix 10); Macintosh and/or HP computer(s).

Allotted Time: 45 minutes

Activities:

With students working in pairs at the computer(s), each student must work through the exercise while their partner coaches them through it. Encourage questions.

With some low level ESL groups, the instructor may need to review the exercise sheets with the class prior to putting the teams to work on the computer(s).

MODULE: Computer Aided Learning

Lesson 6: Learning Styles Inventory

Objective: To continue to familiarize students with the operation of the HP Computer and introduce the student to the Reading and Language and Communication Modules in the curriculum guide.

Required Materials: Final Computer Assignment (appendix 11); HP computer.

Allotted Time: 15 minutes (per individual).

Activities:

This assignment requires that student work individually to complete the Learning Styles Inventory. Instruct the students to follow the instructions carefully and to ask any question that they might have as they work through the exercise.

With some low level ESL groups it may be important to review the exercise prior to beginning. With extremely low level students the instructor may want students to work in pairs.

MODULE: Computer Aided Learning

Lesson 7: The Keyboard Tutor (Where Available)

Objective: To improve typing skills.

Required Materials: Typing Tutor program with either Macintosh or HP computers.

Allotted Time: 30 minutes

Activities:

With students working in pairs, each take turns working through at least one lesson at a time on the tutorial program. Encourage each to coach the other through the various exercises to improve their keyboarding skills.

APPENDICIES

COMPUTER LEARNING SYSTEMS IN THE WORKPLACE

(appendix 1)

THE PARTS OF A COMPUTER

HARDWARE
VOCABULARY, LIST # 1

==========

Study the following list of words that describe the parts of a computer.

CABLE: electrical cord with connecters on each end used to connect a computer to a printer or other device.

CD-ROM: a device connected to the inside or outside of the computer used to read compact disk programs.

CHIP: a magnetic electronic part used to store information for the computer. The *workhorse* of the computer. Internal memory storage unit.

CPU: central processing unit; the brain of the computer,

COMPUTER: information storage and processing device.

DISK: external memory device, used to store information outside of the computer.

DISK DRIVE: the part of the computer that turns the disk to read the information stored on a DISK.

DOT MATRIX: a type of printer that uses a series of dots (.....) to print letters or graphics onto paper.

FLOPPY: another term for DISK.

HARD DRIVE: internal memory, program storage unit used to store disk operating systems and files.

INK JET: a type of printer which uses a microscopic spray of ink to print letters and graphics onto paper.

INTEL: the name of the company that manufacturers the majority of memory chips used in the computer industry.

KEYBOARD: a primary input device made up of a series of letter, number and command keys used to give instructions to the computer.

LASER: a type of printer that uses a fine laser light to print letters and graphics onto paper.

MODEM: a communication device connecting the computer to a network via a telephone line.

MONITOR: a video screen used to display information being processed by the computer.

MOTHER BOARD: the primary component of the computer made up of a cpu and other processing chips.

MOUSE: a primary input device; used to give instructions to the computer with one or two buttons.

PARALLEL: the input only port located at the back of the computer; usually used for connecting the printer to the computer.

PORT: a male or female plug located at the back of the computer.

PRINTER: a device used to create copies of information being stored or processed on the computer.

SERIAL: an in/out port located at the back of the computer which allows other devices to be connected the computer; usually used for devices such as a modem.

VIDEO CARD: an additional memory card (chip) to allow more advanced monitors to be used with a computer.

VIDEO DISK: a system of computer programs utilizing digitized video images and played through the computer with a video disk player.

WRITE THE CORRECT WORD ON EACH LINE BELOW:

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

8) _____

9) _____

10) _____

11) _____

12) _____

13) _____

14) _____

15) _____

16) _____

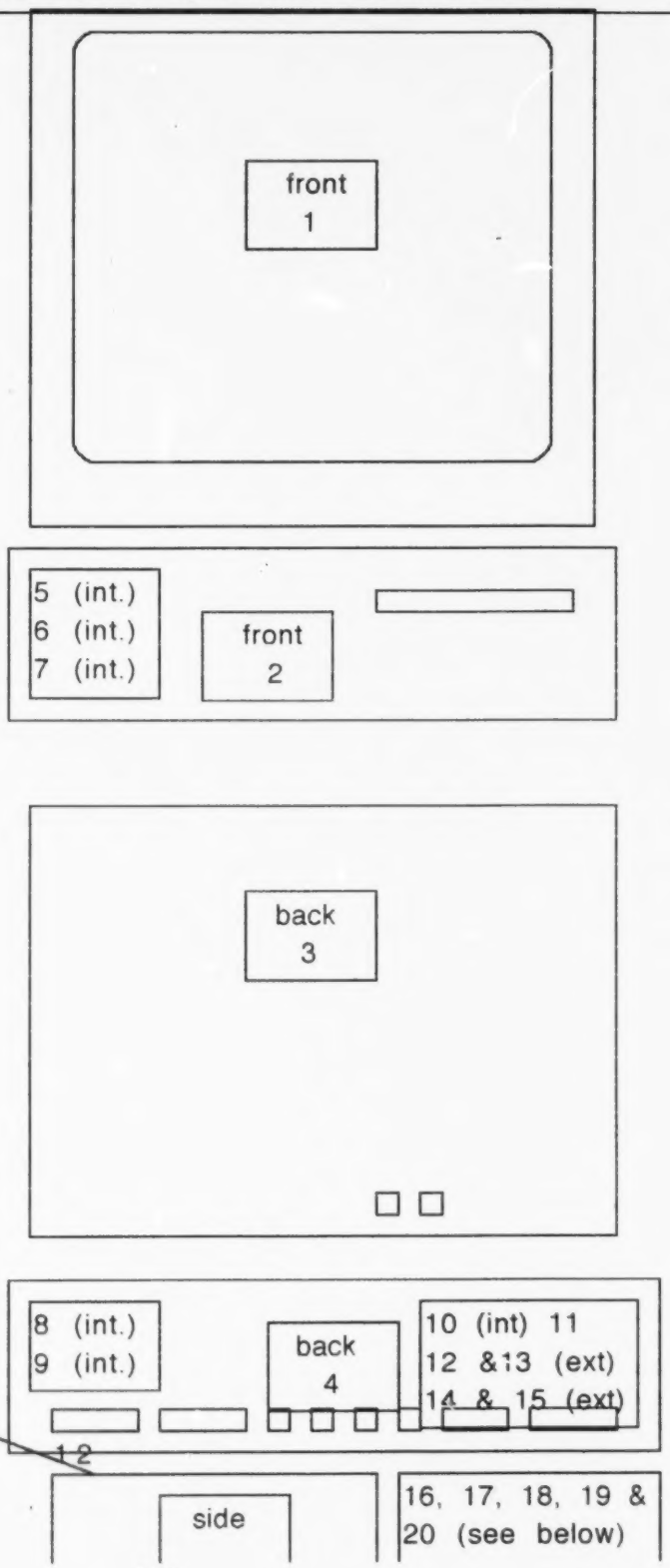
17) _____

18) _____

19) _____

20) _____

(appendix 2)
VOCABULARY MATCHING - COMPUTERS



(appendix 3)

THE LANGUAGE OF THE COMPUTER

SOFTWARE
VOCABULARY LIST #2

==========

Study the following list of words that describe computer language.

APPLICATION: Work done on a computer.

BIT: any single piece of information; 1 to 0, a to z or ON / OFF.

BYTE: any 8 pieces of information; 1 byte = 8 bits.

CODES: symbols used to indicate specific commands given in an application.

COMMAND: instructions given in a computer application.

COPY: a computer command used to move text from one point in an application to another.

CURSOR: a small flashing line on the monitor used to indicate where text may be inserted in an application.

DIRECTORY: a list of applications, or files, within a DOS program.

DOS: disk operating system; a program designed to manage and control application files in the computer memory.

EDIT: to remove, add to or otherwise change text within an application.

ENTER: a command used to tell the computer to do what it's told; a.k.a. *return*.

EXIT: command to leave an application program.

FILE: a group of related information; any single application.

FONT: a type of lettering style chosen for an application.

HELP: to get more information; assistance.

KILOBYTE: 1,000 X 1 byte; 8000 bits.

LAYOUT: command used to change the appearance of an application.

MEGABYTE: 1,000,000 X 1 byte; 8,000,000 bits.

MENU: a list of programs available in an application program.

PROMPT: a code at the beginning of a DOS system indicating the system is ready for a new command.

QUIT: a command to end an application within a program.

RAM: random access memory; the memory in the computer system that is available to the user (person doing the work).

RETURN: see ENTER.

ROM: read only memory; the memory built into the computer system used by the computer itself for it's own functions.

SAVE: command used to place an application into the memory on a floppy disk or hard drive.

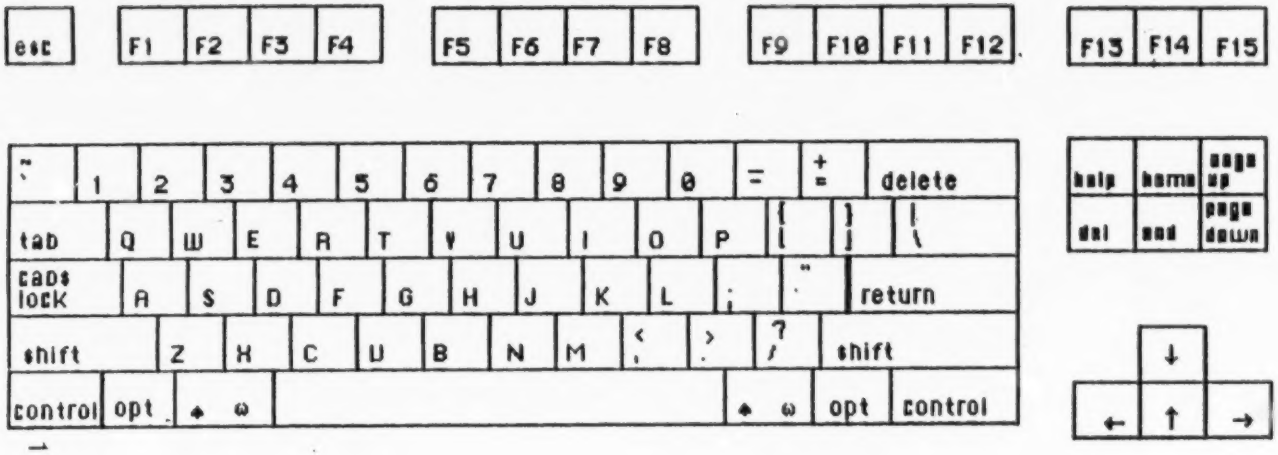
SELECT: command used to highlight text within an application.

SHUTDOWN: command used on Macintosh systems to turn the computer off.

STYLE: command used to chose various types of fonts within a system.

SYSTEM: a package of programs used to perform various functions on a computer.

TOOLS: the group of features built into an application program used to facilitate processing information.


esc
F1 F2 F3 F4
F5 F6 F7 F8
F9 F10 F11 F12
F13 F14 F15
~ ` 1 2 3 4 5 6 7 8 9 0 = + delete
tab Q W E R T Y U I O P { [}] | \
caps lock A S D F G H J K L ; : " ' return
shift Z X C V B N M < , > . ? / shift
control opt ♠ ω ♠ ω opt control
help home page up
del end page down
↓
← ↑ →

12

Keyboard

(appendix 5)

(appendix 6)

THE KEYBOARD

Follow the instructions using the Keyboard Diagram

1. Place a √ in the upper right corner of the keyboard.
2. Draw a Δ on the lower middle key.
3. Put a † in the upper left corner of the keyboard.
4. Make a ° in the lower left key of the keyboard.
5. Put an X on the letters that you use to spell your first name.
6. Put an O on the letters that you use to spell your last name.
7. Write a ? on the middle left key on the keyboard.
8. Circle the arrow in the lower right corner of the keyboard.
9. Put a * on the letters for the initials of your company's name.
10. Tell the teacher when you have finished.

(appendix 4)
LANGUAGE APPLICATIONS

Read the vocabulary list and complete the following sentences with the correct word.

1). This page is one example of an _____ done on this computer.

2). SAVE is one of the _____ that will make the computer do something.

3). The _____ is a list of files in the system.

4). _____ is the program that operates all of the filing systems in the computer.

5). This style of _____ is called HELVETICA. I wonder what that means.

6). One _____ is equal to 8,000 bits of information.

7). One _____ is equal to 8,000,000 bits of information.

8). A _____ is a list of programs; it might also be a list of food.

9). Memory that is only used by the computer is called _____.

10). _____ is the memory that is available to the user.

Write **T** (true) if the statement is true; **F** (false) if the statement is false.

1). _____ A **cursor** is a perso who uses bad language.

2). _____ An **application** is the work that is done on a computer.

3). _____ The **hard drive** is a system that manages programs on a computer.

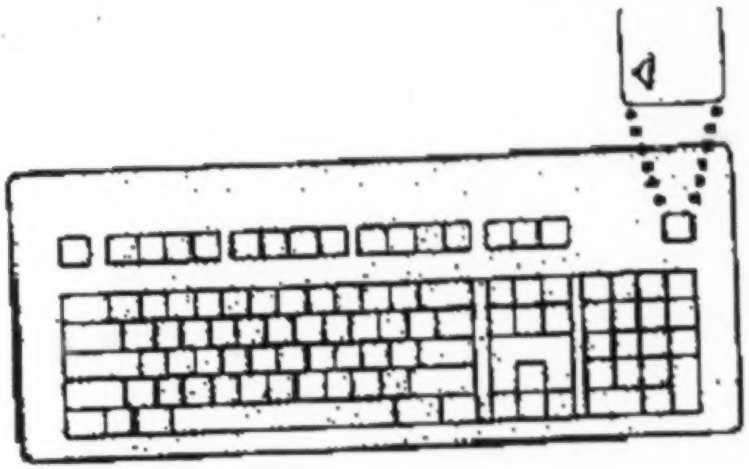
4). _____ **Shutdown** is what happens when the computer malfunctions.

5). _____ The internal memory storage unit is called a **chip**.

Welcome to Macintosh

The most terrifying thing about **technology** is change. With that in mind, as you begin to learn about this computer, remember that when you change something on the computer you can always change it back. So *don't be afraid* of the changes that you make. In these pages we will show you, we hope, almost everything that you ever wanted to know about using a computer, from turning it on to saving and printing what you have created or finished. Of course nothing will replace real experience at the **keyboard** or with the **mouse** but maybe this will help you get started.

I. Starting the Macintosh is easy. It has one button. Find the button at the top right hand corner of the **keyboard**. The **keyboard** is the big flat thing in front of the computer that you type on. It looks like this:

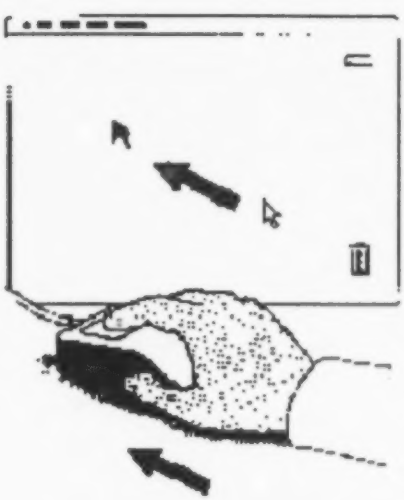


Push the button shown in the picture on the left. This will start the computer. Wait for the screen to come on.

III. In a few moments, you will see a large blue **screen** with a list of words across the top: **File Edit View Special**. On the side of the screen you will see two small pictures: in the top right corner of the screen is a small dark rectangular box with the words *'Macintosh HD'*. This is the *program* box. Inside this box are all of the different programs that you will see on the computer. In the bottom right corner is a **trash** can. This is where you can put anything that you don't want to save for later.

IV. Imagine that the blank *screen* in front of you is your new *desk* There is nothing on your desk yet because you have'nt opened the drawers to see what is in them. Now I will show how to open a drawer.

V. On the right of the **keyboard** is a small box with a button on top of it and a thin cord coming out of the top. This is called a **mouse.** Move the **mouse** around on the pad that it is sitting on and look at the screen. On the screen you will see a small black arrow that moves when you move the **mouse.** This is a *pointer.* You can open the file drawers on your desk with the pointer.



VI. Now that you can move the *pointer* around on your desk with the **mouse,** point the arrow at the little picture on the right that says *Macintosh HD* and click the button twice to open that file drawer. Wait a few moments to let the drawer open. When it opens, a new screen will come on the desk top with several new pictures. All of these pictures are *files* They are like little *folders* that hold lessons and information for you to look at. **These are your folders.** You can look at whichever ones you would like to.

Before you start looking into different folders though, it might be a good idea to to take a tour through the **Macintosh Basics** first. Move the arrow to the picture that says *Macintosh Basics* and click the button twice on the **mouse.** Now you wait again for a few moments and just follow the instructions that the computer gives you to learn more about using the **mouse** and the **keyboard**

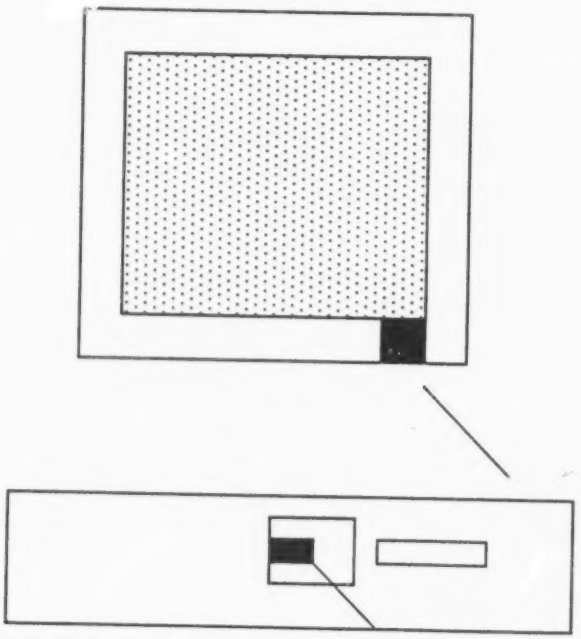
VII. Once you have finished with the basics it is time to practice. In the hard drive (**HD**) folder you will find all of the lessons and games in the file pictures on the screen. Choose any one of them and click the button twice on that picture, and then follow the directions. Be sure to look at the *tutor lessons* first so that you will know how to quit when you are finished.

VIII. Finally, when you are ready to go and you want to turn off the computer, you need to close the *lesson folders* that you have open and clear off the desk - put things away. Follow the directions given in the lesson you are working with, or go to the menu at the top of the screen if there are no directions. To do that, move the pointer to the word at the top of the screen: **File**. Hold the button on the **mouse** down and *drag* the black line down to the bottom of the window to the word **'Quit'**. When the black line is over **'Quit'** let the button go and the file folders will disappear. When the desk is clean, go to the last word at the top of the desk: **Special**, and hold the button down again. *Drag* the line to the words **'Shut Down'**. When 'Shut Down' is in the black line, let go of the button, wait a moment and the computer will turn itself off. Congratulations, you know how to use a computer! The more you practice and use the computer, the better you will get at it and the easier it will become. Don't be afraid to *experiment* and to *explore*. The best way to learn a new city is to get lost. **So get lost!**

Welcome to HP Computers

One of the important things to remember when using computers is that almost anything you change can be changed back and anything you do you can undo too! So dive right in and have fun! In these pages you will find a guide for using the Hewlett Packard computer. Keep it with you so you can refer to it when you're using the computer. Remember, nothing can replace the actual experience of playing with the computer, but maybe this will help get you started.

I. Starting the HP is simple. There are two buttons. Find the button on the lower right side of the screen (monitor). Now find the button on the box (hard drive) below the screen. It is marked with the words "on" and "off" as shown below.



Push the buttons shown by the arrows above. This will start the computer.

II. Wait for the screen to come on.

III. In a few moments, you will see a list of words on the screen. These are the various programs. Below the list of programs is a C>_ with a flashing line (cursor). It will look something like the diagram below.

IV. At the C-prompt (C>) you may type in the name of any of the programs listed on the screen. This is how you bring them up.

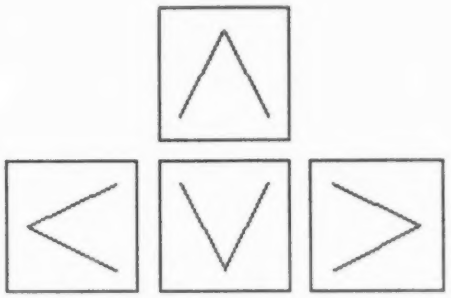
Practice: Bring up the program called Rhubarb by typing "Rhubarb" on the key board in front of you.

V. You will now see the Rhubarb screen with a list of commands at the bottom of the screen.

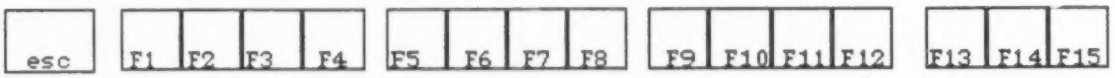
PLAY MODE LAYOUT OPTIONS DISK RECORD QUIT

You will notice that one of the words is highlighted with a black box. Moving this box to the command you need will let you see the various options.

You move the highlighted box by using the keys with the arrows on them located just left of the number keypad on the keyboard. They look like this.



Move the cursor by pressing the keys shown above. By using these keys, move the highlighted box to play and press **enter** (the return key). Note that once you begin, you must follow the directions of each program. They are printed on the screen. To exit this screen, hit F10. This is located on the top row of your keyboard as shown below.



IV. Now, go ahead and practice. Follow the directions on the screen to play the games. Remember, if you get stuck, ask one of the tutors or instructors for help.

V. Finally, when you are through using the computer and want to turn it off, go back to the main menu (the screen that first came on with the list of programs) and push the two buttons you pushed to turn it on. It doesn't matter which button you push first.

Congratulations! You now know how to use the HP!. Remember the more you practice and play, the easier it will become to use. So relax and enjoy!!!

(appendix 9)

THE GAMES WE PLAY

HP COMPUTER EXERCISE

This exercise is intended to help students learn how to maneuver in and out of programs and to learn basic skills with the computer. **Read and follow the instructions very carefully. Remember to ask questions if you don't understand any part of the exercise.**

Hint: Always look for instructions on the computer that will help you through an exercise or help you return to DOS. Remember, each lesson is different and what might work in one program might not work in another.

I. Start the computer. Wait for the Program Menu to come up.

II. Open **MATH BLASTER MYSTERY** (MBM)
Follow the instructions on the screen
Open any one of the five games
Quit and return to the main menu (DOS)

III. Open **RHUBARB**
Enter (play) the game
Select a topic
Quit and return to the main menu (DOS)

IV. Open **WORDPERFECT** (WP)
Type your name (first and last)
Move the cursor back to the first letter in your name (HOME + left arrow)
Push the BLOCK key
Move the cursor over your name with the right arrow key to highlight
Enter the FONTS tool (Cntrl + F8) - hint: hold the control key down and lightly tap the F8 key; do not hold the F8 key down.
Choose SIZE , (2), and press enter
Choose VERY LARGE, and press enter
Space down two spaces (ENTER)
Type the word "CHOIC"
Enter the SPELL checker (Cntrl + F2) - hint: same as fonts tool
Skip your name (Computer won't recognize your name)
Correct the spelling of the word "CHOICE"
Exit to the main menu (do not save changes)

V. Open **DEMON**
Select a subject (example: WORD-A1, GRAM-A2 etc.)
Follow the instructions on the screen
Exit to main menu (DOS)

VI. Shut the computer down
Hint: always take the computer back to the main menu, or the DOS prompt before shutting it down to protect your files.

Note: If you are having problems in WORDPERFECT take a few minute to practice in the "WPLEARN" tutorial program.

(appendix 10)

THE GAMES WE PLAY

MACINTOSH COMPUTER EXERCISE

This exercise is intended to help the student learn how to maneuver through some of the programs in the Macintosh computer. **Read and follow the instructions very carefully. Remember to ask any questions about anything that you don't understand.**

Hint: always look for instructions on the computer screen to help you get around and through each exercise. Remember, each lesson is different and something that works on one program may not work with another.

I. Turn on the computer

II. Open the HARD DRIVE (Macintosh HD) by moving the arrow (mouse) to the ICON in the top right corner and clicking the button twice. Hint: try not to move the mouse while clicking the button. If nothing happens after clicking on the HD icon, leave the icon highlighted and move the arrow to FILE and hold the button down while you pull the highlighted line to OPEN and release the button.

III. Open TEACH TEXT (move the pointer to the TEACH TEXT icon and click twice)
Follow all instructions carefully
Return to the main menu

IV. Open SPELL IT PLUS
Open any one of the five games
Return to the main menu

V. Open WORDPERFECT
Type your full name
Move the pointer to the first letter of your name and hold the button down while you drag the pointer down. Your name will be highlighted.
Let the button go and move the pointer to FONT.
Hold the button and drag the line to any of the fonts that are not highlighted already. Release the button.
Move the pointer to Style and hold the button down while you drag the line to BOLD. Release the button.
Move the pointer to FILE and drag to QUIT. Do not save changes.

VI. At the main menu, move the pointer to SPECIAL and drag to SHUT DOWN and release.

VII. Turn on the CD-ROM. The ON switch is located at the back of the player on the left (as you face it). Turn the sound system on at the same time. The ON switch for the sound system (headphones) is located at the back, on the left.

VIII. Start the computer again.

IX. Select a CD and insert it into the caddy.

X. Insert the caddy into the CD-ROM and let the icon come up onto the screen.

XI. Open the lesson icon (under the HD icon) by double clicking. Follow all instructions carefully through the lesson.

XII. Exit and return to the main menu.

XIII. Close the CD lesson file (FILE and drag to CLOSE)

XIV. Drag the CD lesson icon to TRASH in the lower right corner of the screen and release.

XV. Move the pointer to SPECIAL and drag to SHUT DOWN.

(appendix 11)

FINAL COMPUTER ASSIGNMENT

LEARNING STYLES INVENTORY

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Read and follow all instructions carefully. Complete the **Learning Styles Inventory**. Print your graph when finished and bring it to class.

To get into the **Learning Styles Inventory**, first turn on the HP computer. When the main menu comes up, type LSTYLES at the C> _ (c- prompt) and press enter. Follow all instructions carefully. When the program asks you for your class number, enter the number 1. Answer each question honestly about yourself and follow the instructions on the screen.

There are 45 questions in the inventory. You must complete all of them before you can exit the program. At the end of the program it will ask if you want to see your graph. Enter yes. When asked if you want to print your graph, enter <P> for print. Make sure the printer is on and has paper.

Answer the following questions about the **Learning Styles Inventory**:

Can you use this information when communicating with others? How?

(Note: logging information, writing memos and speaking are all forms of communication.)

COMPUTER LEARNING SYSTEMS IN THE WORKPLACE

Notes to the teacher:

Ever so gradually technology is creating new opportunities for new strategies in the classroom - whereever that classroom might be. At every level, the introduction of computers into the learning experience is an enlightening, exciting and motivating tool. In the workplace, it should be remembered that the computer is a tool, just like any other that the student might use. It should also be remembered that the computer programs available, so far, do not have the specific applications looked for in the workplace education program. Therefor, the CAL system in the workplace is primarily a practice tool for more generalized basic skills enhancement. The most utilitarian aspect of educational computer technology, it seems to me, is that the computer offers an extremely wide variety of different applications for skills learned in the classroom; applications that the student might not otherwise have the opportunity to prepare for.

To the student:

The first rule of thumb about learning how to use a computer, or for learning anything for that matter, is that you should never be afraid to explore. Learning how to use computers is like learning the streets of a new town: you're going to be lost for awhile. There is nothing inside the computer that can hurt you. The computers that you will use in this class are there for you and should you hit the wrong key somewhere and wipe something out (not likely) it can always be replaced. So explore.

ENJOY